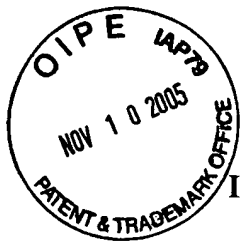




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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appellant:

CHARLES A. LIEDER
LLOYD E. FUNK
DAVID A. BARKER

Filed: April 21, 2000

Serial No.: 09/556,852

**For: GASOLINE-OXYGENATE BLEND
AND METHOD OF PRODUCING
THE SAME**

§§

Group Art Unit: 1714

Examiner: M. Medley

Attorney Docket No.: 013129/00025

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Appellants hereby submit this Appeal Brief, in triplicate, with the requisite fee as set forth in 37 C.F.R. § 1.17(c). A Notice of Appeal was timely filed on September 8, 2005. Accordingly, this Appeal Brief is accordingly timely filed. The requisite fee set forth in 37 C.F.R. § 1.17(c) may be debited from the Deposit Account 12-1322 (Ref. No.: 013129-00025).

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is Shell Oil Company, a corporation formed under the laws of the State of Delaware, to whom this application has been assigned.

II. RELATED APPEALS AND INTERFERENCES

No related appeals or interferences exist.

III. STATUS OF CLAIMS

As originally filed, this application contained Claims 1-29. Claims 1-40 are active in this application. The Examiner has rejected Claims 1-40 on the grounds discussed herein. Accordingly, the claims on appeal are Claims 1-40. A copy of the claims on appeal is set forth in the *Appendix*. Each of these claims stands finally rejected for which Appellants bring the present appeal to the Board.

IV. STATUS OF AMENDMENT

Claims 1, 10, 16-18 23, and 26 were amended in the Amendment and Response to the Office Action Dated September 10, 2004. No amendments were made subsequent to the Final Rejection dated March 3, 2005. All amendments were made prior to the final rejection and have been entered into the record and considered by the Examiner.

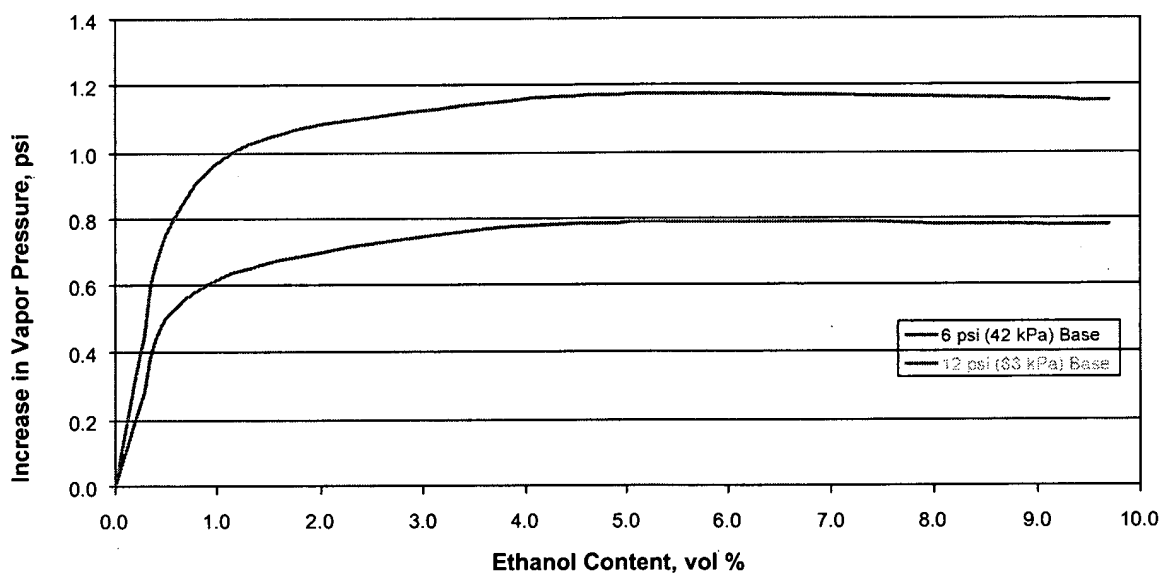
V. SUMMARY OF INVENTION

Appellants' invention relates to novel gasoline-oxygenate blends suitable for use in automotive engines containing at least one alcohol. The relatively low boiling point of alcohols (e.g., the boiling point of ethanol is 78°C.), while being significantly higher than the initial boiling point of gasoline (approximately 30°C), is lower than the mid-boiling point of gasoline

(approximately 100°C). The vapor pressure of neat alcohols is lower than that of gasoline. Consequently one would expect that blending an alcohol with gasoline would reduce the Reid Vapor Pressure (“RVP”) (defined in ll. 5-8, p. 7) and somewhat increase mid-range volatility. However, when alcohol is blended with gasoline at concentrations up to around 30%, there is an unexpected increase in vapor pressure which causes the blend to have significantly higher RVP than the base gasoline. This is shown in FIG. 1 below for ethanol:

FIG. 1

Effect of ethanol addition on Reid Vapor Pressure (RVP) at two levels of base fuel RVP



The effect of alcohols, such as methanol and ethanol, on the increase in vapor pressure of a gasoline blend is further reported in Chapter 2 of API Publication 4261, a copy of which was attached to the Amendment and Response to Office Action of June 4, 2002, filed on October 4, 2002. Note in particular Figs. 9, 10 and 11. As clearly shown in Figure 9, the maximum RVP increase occurs at around 5-15 % v/v alcohol. This is the level of alcohol in most commercial blends. The resulting blend is often too volatile, unless base fuel volatility is adjusted to meet

fuel specifications. Fig. 10 of API Publication 4261 further shows that the addition of 10 % v/v ethanol to a base fuel composition typically raises the RVP by about 1 PSI; the increase for 10% v/v methanol being almost 3 PSI.

Gasoline-oxygenate blends of gasoline formulations exhibiting the RVP and alcohol volume specifications recited in the claims of Appellants dramatically reduce (and in most instances, eliminate) the need for methyl t-butyl ether (MTBE) in gasoline formulations. In addition, the claimed gasoline-oxygenate blends provide increased percentile reductions of NO_x, toxic pollutants and VOCs. Compare, for instance, the data for Percent Reduction (“% Red”) in NO_xR, ToxR and VOCR in Table 9 for A2, C2, D2, E2, F2, I2, J2, L2, O2, Q2, R2 and S2 (outside of the claimed blends) versus A1, C1, D1, E1, F1, I1, J1, L1, O1, Q1, R1 and S1, respectively (within the claims of Appellants).

The novel compositions of Appellants meet RVP specifications *by adjustment to the base fuel composition*. Note, for instance, reference to the preferred butane percentile in the FFB (defined in ll. 26-27, p. 14 through l. 2, p. 15 of the specification). This, in turn, causes a reduction in the vapor pressure of the light components of the base gasoline. The addition of alcohol to the base gasoline renders a RVP within the claimed limitations. In one embodiment of the invention, the alcohol may be introduced to the base gasoline at a remote location, such as a distribution terminal. This is often necessary since gasoline containing an alcohol cannot generally be shipped via common pipelines.

VI. ISSUES

The issues on appeal are premised on the grounds of rejection set forth on pages 2-4 of the Final Office Action dated March 8, 2005. The issues are as follows:

1. Whether Claims 1-9, 17-22, 26-40 fail to comply with the written description requirement under 35 U.S.C. § 112, First Paragraph.

2. Whether Claims 1, 4-10, 13-17, and 23-29 are unpatentable under 35 U.S.C. § 102(b) over U.S. Patent No. 5,679,117 (“*Jarvis*”).

VII. GROUPING OF THE CLAIMS

1. For purposes of the obviousness rejection under 35 U.S.C. § 112, First Paragraph, all the Claims 1-9, 17-22, 26-40 stand or fall together.

2. For purposes of the anticipation rejection under 35 U.S.C. § 102(b) over *Jarvis*:

(a.) Claims 1, 4, 7-10, 13, 15-17, and 23-29 stand or fall together; and

(b.) Claims 5-6 and 14 stand or fall together.

VIII. ARGUMENTS

A. The Examiner Has Improperly Maintained the Rejection of Claims 1-9, 17-22, 26-40 under 35 U.S.C. § 112, First Paragraph.

The Examiner has maintained a rejection of Claims 1, 17, 18, 26, 30, 34, and 38 under 35 U.S.C. § 112, First Paragraph as failing to comply with the written description requirement. The following presents each of the contentions of the Examiner and the written support from the Application as filed for the Claims. In order to comply with the written description requirement, the specification “need not describe the claimed subject matter in exactly the same terms as used in the claims; it must simply indicate to persons skilled in the art that as of the [filing] date the applicant had invented what is now claimed.” *E.g., Eiselstein v. Frank*, 52 F.3d 1035, 1038, 34 U.S.P.Q.2d 1467, 1470 (Fed. Cir. 1995) (citing *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562, 19 U.S.P.Q.2d 1111, 1115 (Fed. Cir. 1991) and *In re Wertheim*, 541 F.2d 257, 265, 191 U.S.P.Q. 90, 98 (C.C.P.A. 1976)). “The test for determining compliance with the written description

requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language.” *In re Kaslow*, 707 F.2d 1366, 1375, 217 U.S.P.Q. 1089, 1096 (Fed. Cir. 1983). As illustrated below, the Application as filed supported the current Claims.

1. Rejection of Claims 1, 17, and 26.

The Examiner rejected Claims 1, 17, and 26 for the inclusion of “less than or equal to 10 volume percent.” Appellants respectfully note that the Specification as filed contained Table 8: Phase I Gasoline-Oxygenate Blend Recipes, that is reprinted herein, which provided support for this element:

TABLE 8: PHASE I GASOLINE-OXYGENATE BLEND RECIPES

BLEND	EtOH	C4	FFB	RAFF	HOR	TOL	LCC	ALKY	LSCC	HCC
	(in terms of volume percent of the total blend) (%)									
A1	9.50	0.00	1.27	0.00	20.72	17.92	8.05	42.54	0.00	0.00
A2	5.42	0.0	1.3	0.0	21.7	18.7	8.4	44.5	0.0	0.0
B2	9.50	0.00	0.00	15.39	16.20	9.41	0.00	23.89	10.59	15.02
B2	5.42	0.0	0.0	16.1	16.9	9.8	0.0	25.0	11.1	15.7
C1	9.50	1.45	0.00	0.00	14.93	27.60	13.39	33.12	0.00	0.00
C2	5.42	1.5	0.0	0.0	15.6	28.8	14.0	34.6	0.0	0.0
D1	9.50	0	0	15.7	24.8	0	12.8	15.7	18.6	2.9
D2	5.42	0.0	0.0	16.5	25.9	0.0	13.3	16.5	19.4	3.0
E1	9.50	0.00	0.00	22.63	25.25	0.00	0.00	15.84	16.83	9.86
E2	5.42	0.0	0.0	23.6	26.4	0.0	0.0	16.6	17.6	10.3
F1	9.50	0.00	0.00	9.14	9.23	32.85	16.47	22.81	0.00	0.00
F2	5.42	0.0	0.0	9.6	9.6	34.3	17.2	23.8	0.0	0.0
G1	9.50	0.09	3.35	0.00	34.39	7.15	9.50	35.93	0.00	0.00
G2	5.42	0.1	3.5	0.0	35.9	7.5	9.9	37.5	0.0	0.0
H	9.50	0.00	0.00	12.49	15.48	0.00	0.09	25.61	18.55	18.19
I1	9.50	0.00	1.81	19.10	8.78	19.28	11.31	9.68	20.54	0.00
I2	5.42	0.0	1.9	20.0	9.2	20.1	11.8	10.1	21.5	0.0
J1	9.50	0.00	1.45	0.00	31.77	9.59	12.94	32.67	0.00	2.08
J2	5.42	0.0	1.5	0.0	33.2	10.0	13.5	34.1	0.0	2.2
K1	9.50	0.00	0.00	20.27	17.47	13.39	7.24	20.72	10.05	1.36
K2	5.42	0.0	0.0	21.2	18.3	14.0	7.6	21.7	10.5	1.4
L1	9.40	0.00	0.00	23.47	16.13	7.34	13.32	10.87	17.03	2.54

BLEND	EtOH	C4	FFB	RAFF	HOR	TOL	LCC	ALKY	LSCC	HCC
	(in terms of volume percent of the total blend) (%)									
L2	5.42	0.0	0.0	24.5	16.8	7.7	13.9	11.3	17.8	2.6
M	9.50	0.00	0.00	11.67	19.10	0.18	9.96	20.27	17.20	12.13
N	9.72	0.00	0.72	18.33	4.15	23.20	17.42	0.00	17.33	9.21
O1	9.79	0.00	2.71	0.00	20.57	15.97	9.11	36.26	0.00	5.68
O2	5.42	0.0	2.8	0.0	21.6	16.7	9.6	38.0	0.0	6.0
P	9.72	0.00	0.00	15.98	0.00	19.23	6.68	19.41	15.80	13.27
Q1	9.64	0.00	0.00	17.80	4.70	14.64	3.34	12.83	18.61	18.52
Q2	5.42	0.0	0.0	18.6	4.9	15.3	3.5	13.4	19.5	19.4
R1	9.59	0.00	0.00	20.52	17.36	5.33	7.23	5.79	23.87	10.22
R2	5.42	0.0	0.0	21.5	18.2	5.6	7.6	6.1	25.0	10.7
S1	9.69	0.00	0.99	11.56	0.00	26.55	14.54	36.76	0.00	0.00
S2	5.42	0.0	1.0	12.1	0.0	27.8	15.2	38.5	0.0	0.0
T	9.66	0	0	13.5	15.3	4.2	15.4	12.3	26.6	3.3
U	9.66	0	0	4.2	12.8	15.7	7.5	32.2	0	17.9
V	9.81	0	0	19.1	13.3	0	0	17.2	26.8	13.7
W	9.67	0	0	0	32	11.8	26.7	19.7	0	0
X	9.65	0	0	9.7	0	0.4	0.73	34.5	24	21.1

Application, pp. 20-21. These blends show “an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent” as labeled EtOH column in this example. As shown, the EtOH or alcohol content of samples A1-X contain an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent.

Similarly, Appellants respectfully note that the Specification as filed contained Table 13: Phase II Gasoline-Oxygenate Blend Recipes, that is reprinted herein:

TABLE 13: PHASE II GASOLINE-OXYGENATE BLEND RECIPES

BLEND	EtOH	C4	FFB	RAFF	HOR	TOL	LCC	ALKY	LSCC	HCC
	(in terms of volume percent of the total blend) (%)									
AA	9.750	0.0	4.1	13.3	14.0	24.0	0.0	34.9	0.0	0.0
BB	9.900	0.0	0.0	18.2	17.6	0.0	18.7	13.7	19.7	2.3
CC	9.680	0.0	0.0	16.4	30.3	0.2	0.0	24.6	1.4	17.3
DD1	9.610	0.0	1.5	0.1	11.6	16.5	19.6	35.2	6.1	0.0
DD2	5.420	0.0	1.6	0.1	12.1	17.2	20.5	36.8	6.3	0.0
EE1	9.450	0.0	0.2	2.2	2.1	24.8	22.9	36.6	1.8	0.0
EE2	5.420	0.0	0.2	2.3	2.2	25.9	23.9	38.2	1.9	0.0
FF	9.640	0.4	0.0	20.6	30.5	0.0	1.5	16.0	8.0	13.4
GG	9.560	0.0	4.4	6.4	15.7	35.2	16.4	12.3	0.0	0.0
HH	9.910	0.8	0.2	21.2	36.7	0.2	4.1	4.8	13.2	8.9
II	9.760	0.0	2.0	2.9	34.9	12.4	15.2	21.7	0.0	1.3
JJ	9.660	0.0	0.0	25.2	0.1	18.6	15.0	12.3	19.2	0.0
KK1	9.620	0.0	0.6	5.3	4.2	28.6	20.2	31.6	0.0	0.0
KK2	5.420	0.0	0.7	5.6	4.4	29.9	21.1	33.1	0.0	0.0

Application, p. 27. These blends show “an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent” as labeled EtOH column in this example. As shown, the EtOH or alcohol content of samples AA-KK2 contain an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent.

Accordingly, there is support for the limitation of this range in Claims 1, 17, 26, and their dependencies. The tables include sufficient data regarding the alcohol content to show that the Appellants were in possession of the invention.

2. Rejection of Claim 18.

With respect to the requirement of a “benzene content of the blend is greater than 0.27 volume percent” in Claim 18 and its dependencies, the Appellants note that in Table 10: Additional Phase I Gasoline-Oxygenate Blend Properties, Blend X contains a 0.27 Volume Percent Benzene. The Table from the specification is reprinted below:

TABLE 10: ADDITIONAL PHASE I GASOLINE-OXYGENATE BLEND PROPERTIES

Blend	Oxy	Benz	Sulfur	Olef	Arom	NOxR	ToxR	VOCR
	Wt%	Vol%	PPMW	Vol%	Vol%	% Red	% Red	% Red
A1	3.54	0.53	23	1.41	23.25	15.7	40.4	47.5
A2	2.02	0.55	24	1.47	24.30	15.8	39.5	43.9
B1	3.49	0.58	197	2.90	25.01	7.2	34.5	39.5
B2	1.99	0.61	206	3.03	26.14	7.1	33.1	35.9
C1	3.47	0.53	34	2.31	33.89	13.5	35.2	44.6
C2	1.98	0.55	36	2.41	35.41	13.1	32.7	37.8
D1	3.56	0.71	80	3.68	23.75	12.1	33.4	33.8
D2	2.03	0.75	84	3.85	24.83	12.0	32.8	31.1
E1	3.58	0.68	143	1.92	24.34	9.3	33.2	37.4
E2	2.04	0.71	149	2.01	25.43	9.4	32.6	37.2
F1	3.48	0.63	70	4.61	32.97	11.4	34.3	45.6
F2	1.99	0.66	73	4.82	34.46	11.7	32.3	45.6
G1	3.46	0.67	36	2.10	25.73	14.1	36	39.8
G2	1.97	0.70	38	2.20	26.89	14.4	35.4	41.3
H	3.55	0.52	261	4.30	16.76	7.5	36.8	39.3
I1	3.52	0.70	68	3.08	31.08	11.5	32.1	37.8
I2	2.01	0.73	71	3.21	32.48	11.6	30.9	36.1
J1	3.53	0.85	83	3.79	28.20	11.5	31.8	41.7
J2	2.01	0.89	87	3.96	29.47	11.6	29.9	39.0
K1	3.54	1.05	106	2.38	24.83	10.5	29.9	36.6
K2	2.02	1.10	111	2.49	25.95	10.6	29.3	40.4
L1	3.45	0.69	108	2.82	27.83	9.9	33.6	39.9
L2	1.99	0.72	113	2.94	29.06	9.7	32.7	38.2
M	3.50	0.77	215	4.70	26.14	6	30.3	37.6
N	3.51	0.78	247	7.39	31.62	3.2	27.1	35.6
O1	3.59	0.64	116	3.99	28.50	9.9	33.8	37.5
O2	1.99	0.67	122	4.18	29.88	9.8	32.4	36.4
P	3.56	0.51	213	3.06	25.15	6.2	35.8	38.3
Q1	3.50	0.69	260	1.15	30.83	3.9	28.2	36.7
Q2	1.97	0.73	272	1.21	32.27	3.7	26.3	33.6
R1	3.54	0.85	177	4.55	27.11	7.1	28.8	33.3
R2	2.00	0.89	185	4.76	28.36	7.1	27.5	32.6
S1	3.59	0.56	88	4.20	23.60	11.8	39.1	38.7
S2	2.01	0.59	92	4.40	24.71	11.8	37.7	36.5
T	3.54	0.73	128	2.11	28.15	9.3	31.4	38.3
U	3.54	0.49	250	4.86	25.18	5.3	35.3	39.2
V	3.61	0.64	177	3.32	22.57	8.4	34.1	37.4
W	3.50	0.81	110	5.41	33.39	9.1	29.9	38.3

Blend	Oxy	Benz	Sulfur	Olef	Arom	NOxR	ToxR	VOCR
	Wt%	Vol%	PPMW	Vol%	Vol%	% Red	% Red	% Red
X	3.58	0.27	286	5.92	32.65	2.7	32.4	35.2

Application, pp. 24-25. Accordingly, there is support for the limitation of this range in Claim 18 and its dependencies. The table includes sufficient data to show that the Appellants were in possession of the invention and provided a written description of same; accordingly a reconsideration is respectfully requested.

3. Rejection of Claim 30.

With respect to the requirement of a “the aromatic content of the blend is greater than 16.76 volume percent” in Claim 30 and its dependencies, Appellants note that in Table 10: Additional Phase I Gasoline-Oxygenate Blend Properties, Blend H contains an aromatic content of the blend of 16.76 volume percent is disclosed. The Table was reprinted above.

Accordingly, there is support for the limitation of this range in Claim 30 and its dependencies. The table includes sufficient data to show that the Appellants were in possession of the invention and provided an adequate description.

4. Rejection of Claim 34.

With respect to the requirement of “the olefin content of the blend is greater than 1.15 volume percent” in Claim 34 and its dependencies, the Appellants note that in Table 10: Additional Phase I Gasoline-Oxygenate Blend Properties, Blend Q1 contains an olefin content of 1.15 volume percent. The Table was reprinted above.

Accordingly, there is support for the limitation of this range in Claim 34 and its dependencies. The table includes sufficient data to show that the Appellants were in possession of the invention.

5. Rejection of Claim 38.

With respect to the requirement of “a Dry Vapor Pressure Equivalent greater than or equal to 5.3 PSI” in Claim 38 and its dependencies, the Appellants note that in Table 12: Phase II Neat Blend Recipes Properties, Blends BB and CC contain a Dry Vapor Pressure Equivalent of 5.3 PSI. This limitation is also disclosed. The Table is reprinted below.

TABLE 12: PHASE II NEAT BLEND RECIPES PROPERTIES

Blend	RON	MON	(R+M)/2	DVPE	T10	T50	T90	EP	E200	E300
				PSI	°F	°F	°F	°F	Vol. %	Vol. %
AA	96.5	87.5	92.0	5.5	156.3	224.5	308.5	387.0	30.5	88.0
BB	88.1	81.9	85.0	5.3	145.4	213.7	342.0	415.5	42.9	79.1
CC	90.7	83.6	87.2	5.3	150.6	214.7	327.7	406.2	40.0	83.1
DD	96.3	87.7	92.0	5.5	151.4	222.6	308.3	398.3	33.1	88.1
EE	96.6	87.9	92.3	5.5	159.0	217.1	277.0	375.7	33.9	92.1
FF	89.8	82.5	86.2	5.5	145.9	218.4	336.0	414.6	40.2	79.9
GG	97.2	86.8	92.0	5.5	153.8	228.1	303.9	386.3	29.9	88.8
HH	89.0	81.8	85.4	5.5	146.3	231.5	340.8	416.3	36.9	75.1
II	96.4	87.2	91.8	5.5	152.7	231.4	323.4	393.0	30.3	83.2
JJ	88.4	81.9	85.2	5.4	150.1	213.0	322.6	414.5	41.1	85.4
KK	96.6	87.0	91.8	5.4	159.9	218.4	281.2	374.0	32.8	92.1

Application, p. 26.

Accordingly, support for the limitation of this range in Claim 38 and its dependencies is present in the specification. The table includes sufficient data to show that the Appellants were in possession of the invention and disclosed same. The written description requirement is supported by the data provided in the Specification as filed. Accordingly, the grounds of rejection over the written requirement should be reversed.

B. The Examiner Has Improperly Maintained the Rejection of Claims 1, 4-10, 13-17 and 23-29 Under 35 U.S.C. §102(b) Over *Jarvis*.

The Examiner has rejected Claims 1, 4-10, 13-17, and 23-29 under 35 U.S.C. § 102(b) as being anticipated by *Jarvis*. To anticipate a claim, a reference must disclose every limitation of the claimed invention either explicitly or inherently. *In re Schreiber*, 44 U.S.P.Q.2d 1429, 1431 (Fed. Cir. 1997).

1. Claims 1, 4, 7-10, 13, 15-17, and 23-29 are Not Anticipated by *Jarvis*.

Jarvis does not disclose the alcohol content of the “final product.” Though a contestable RVP is listed for this final product, all of the rejected claims also recite an alcohol content. Claim 1 recites “an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent.” Claim 26 recites “an alcohol content less than or equal to 10 volume percent.” Claims 10 and 23 recite “an alcohol content greater than about 5.0 volume percent.” *Jarvis* fails to provide disclosure of an alcohol content of the “final product.”

Moreover, *Jarvis* fails to disclose a *blend* of gasoline and oxygenate. *Jarvis* discloses a reaction product, not a blend, of gasoline and an oxygenate. Each of Claims 1, 4-10, 13-17, and 23-29 specifically recite a gasoline-oxygenate blend. Appellants provided Declaration of Charles A. Lieder, Ph.D., under 37 C.F.R. § 1.132, submitted with Response to Office Action of February 10, 2003, filed on April 9, 2003, which established that *Jarvis* was directed to a chemical reaction and not a blend. The Examiner has failed to address the conclusions reached by Dr. Lieder that *Jarvis* is drawn to a reaction product because *Jarvis*:

(1) discloses the use of a platinum catalyst in “an elongated catalyzing chamber” (lines 25-27 of column 1 of *Jarvis*). Catalysts are used to accelerate chemical reactions and are not useful in blends of mixtures;

(2) characterizes his product as being derived from a “catalyzed mixture”;

(3) demonstrates a disparity in the reported physical properties of the products and the theoretical physical properties of the products (discussed below); and

(4) recites conditions characteristic of chemical reactions, as set forth in l. 25, col. 4 through l. 3., col. 5. *See* further paragraph 6 of Declaration of Dr. Lieder.

Because *Jarvis* fails to disclose a *blend* of gasoline and oxygenate and because each of Claims 1, 4-10, 13-17, and 23-29 recite an alcohol content that is not disclosed by the “final product” of *Jarvis*, the grounds of rejection over *Jarvis* should be reversed.

2. Claims 5-6 and 14 Do Not Stand or Fall With the Other Claims.

Even if independent Claims 1, 18, 23 and 26 and dependent claims 4, 7-9, 13, 15-17, 21-22, 24-25 and 27-29 are anticipated by *Jarvis*, which they are not, Claims 5-6 and 14 are not anticipated by *Jarvis* and must be considered independently because *Jarvis* does not address the need for reducing toxic air pollutants emissions, much less provide a percentile amount for the reduction in toxic air pollutant emissions by the use of the disclosed hydrocarbons. Thus, Claims 5-6 and 14 are not anticipated by *Jarvis*.

Further, the Examiner has not argued that the rejection of Claims 5-6 and 14 is based on inherency and cannot now meet such a burden. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Int. 1990) (the Examiner must show “a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art.”).

IX. CONCLUSION

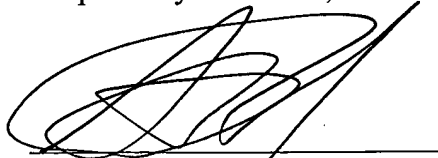
The rejections of:

- Claims 1-9, 17-22, 26-40 under 35 U.S.C. § 112, First Paragraph; and
- Claims 1, 4-10, 13-17, and 23-29 under 35 U.S.C. § 102(b) over *Jarvis*

are improper for the reasons discussed herein. Accordingly, Claims 1-40 are in condition for allowance and the rejections of the Examiner should be REVERSED.

A decision of the Board consistent with this showing is earnestly requested.

Respectfully submitted,




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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief – Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on November 7, 2005.



David Pille

APPENDIX
CLAIMS ON APPEAL

1. A gasoline-oxygenate blend, suitable for combustion in an automotive engine, having the following properties:

- (a) a Dry Vapor Pressure Equivalent less than about 7.2 PSI; and
- (b) an alcohol content which is greater than about 5.0 volume percent but less than or equal to 10 volume percent.

2. The blend of Claim 1 wherein the blend has a 50% distillation point less than about 195°F.

3. The blend of Claim 1 wherein the blend has a 10% distillation point less than about 126°F.

4. The blend of Claim 1 wherein the blend has an anti-knock index greater than or equal to about 89.

5. The blend of Claim 1 wherein the blend is capable of reducing toxic air pollutants emissions by more than about 21.5%.

6. The blend of Claim 5 wherein the blend is capable of reducing toxic air pollutants emissions by more than about 30%.

7. The blend of Claim 1 wherein the blend has an oxygen weight percent that is greater than about 1.8 weight percent.

8. The blend of Claim 1 wherein the blend contains ethanol.

9. The blend of Claim 1 wherein the blend contains essentially no methyl t-butyl ether.

10. A gasoline-oxygenate blend, suitable for combustion in an automotive engine, comprising at least two hydrocarbon streams and an oxygenate stream consisting essentially of an alcohol and having:

a Dry Vapor Pressure Equivalent less than about 7.2 PSI; and
an alcohol content greater than about 5.0 volume percent.

11. The blend of Claim 10 wherein the blend has a 50% distillation point less than about 178°F.

12. The blend of Claim 10 wherein the blend has a 10% distillation point less than about 123°F.

13. The blend of Claim 10 wherein the blend has an anti-knock index greater than about 89.

14. The blend of Claim 10 wherein the blend is capable of reducing toxic air pollutants emissions by more than about 21.5%.

15. The blend of Claim 10 wherein the blend has an oxygen weight percent that is greater than about 1.8 weight percent.

16. The blend of Claim 10 wherein the oxygenate stream contains ethanol.

17. The blend of Claim 10 wherein the blend contains less than or equal to 10 volume percent of alcohol.

18. A gasoline-oxygenate blend, suitable for combustion in an automotive engine having the following properties:

(a) a Dry Vapor Pressure Equivalent less than about 7.2 PSI; and

(b) an alcohol content greater than about 5.0 volume percent

wherein the benzene content of the blend is greater than 0.27 volume percent.

19. The blend of Claim 18 wherein the blend has a 50% distillation point less than about 250°F.

20. The blend of Claim 18 wherein the blend has a 10% distillation point less than about 158°F.

21. The blend of Claim 18 wherein the blend contains ethanol.

22. The blend of Claim 18 wherein the blend contains essentially no methyl t-butyl ether.

23. A process for preparing a gasoline-oxygenate blend comprising combining a blend of hydrocarbons with a stream consisting essentially of an alcohol, wherein the resulting gasoline-oxygenate blend has the following properties:

(a) a Dry Vapor Pressure Equivalent less than about 7.2 PSI; and

(b) an alcohol content greater than about 5.0 volume percent.

24. The process of Claim 23 wherein the alcohol is ethanol.

25. The process of Claim 23 wherein the resulting blend contains essentially no methyl t-butyl ether.

26. A process for preparing a gasoline-oxygenate blend comprising combining a blend of hydrocarbons with an alcohol, wherein the resulting gasoline-oxygenate blend has

a Dry Vapor Pressure Equivalent less than about 7.2 PSI; and

an alcohol content less than or equal to 10 volume percent.

27. The process of Claim 26 wherein the alcohol is ethanol.

28. The process of Claim 26 further comprising introducing ethanol during the blending.

29. The process of Claim 26 wherein the resulting gasoline-oxygenate blend contains essentially no methyl t-butyl ether.

30. A gasoline-oxygenate blend, suitable for combustion in an automotive engine having the following properties:

- (a) a Dry Vapor Pressure Equivalent less than about 7.2 PSI; and
- (b) an alcohol content greater than about 5.0 volume percent

wherein the aromatic content of the blend is greater than 16.76 volume percent.

31. The blend of Claim 30 wherein the blend has a 50% distillation point less than about 250°F.

32. The blend of Claim 30 wherein the blend has a 10% distillation point less than about 158°F.

33. The blend of Claim 30 wherein the blend contains ethanol.

34. A gasoline-oxygenate blend, suitable for combustion in an automotive engine having the following properties:

- (a) a Dry Vapor Pressure Equivalent less than about 7.2 PSI; and
- (b) an alcohol content greater than about 5.0 volume percent

wherein the olefin content of the blend is greater than 1.15 volume percent.

35. The blend of Claim 34 wherein the blend has a 50% distillation point less than about 250°F.

36. The blend of Claim 34 wherein the blend has a 10% distillation point less than about 158°F.

37. The blend of Claim 34 wherein the blend contains ethanol.

38. A process for preparing a gasoline-oxygenate blend which comprises adjusting a

hydrocarbon base fuel having a Dry Vapor Pressure Equivalent greater than or equal to 5.3 PSI with an alcohol, wherein the Dry Vapor Pressure Equivalent of the gasoline-oxygenate blend is not greater than 7.2 PSI and further wherein the alcohol content of the gasoline-oxygenate blend is greater than about 5.0 volume percent.

39. The process of Claim 38 wherein the alcohol is ethanol.

40. The process of Claim 38 wherein the resulting gasoline-oxygenate blend contains essentially no methyl t-butyl ether.